IN THE CLAIMS

Claim 1 (currently amended): A method for performing defect spatial signature analysis of a semiconductor process, comprising:

creating a defect database of wafers having defect spatial signatures, wherein macroscopic spatial patterns at the wafer level are absent from the defect database ~~the defect spatial signatures in the defect database are uncategorized data~~;

generating a recent macroscopic defect spatial signature; and

determining if the recent macroscopic defect spatial signature corresponds to at least one of the defect spatial signatures reconstructed from the defect locations in the defect database.

Claim 2 (currently amended): The method of claim 1, wherein the defect database contains defect coordinates, and wherein identification of wafer level spatial relationships between the defect coordinates is absent ~~uncorrelated defect locations~~.

Claim 3 (original): The method of claim 2, wherein creating the defect database includes creating a relational database of defects.

Claim 4 (previously presented): The method of claim 3, further including storing coordinates of a process signature of a first type and storing coordinates of a process signature of a second type from each wafer, wherein the spatial orientation of the coordinates of the process signatures of the first and second types are in relation to each other.

Claim 5 (previously presented): The method of claim 3, further including identifying a local density of defects for each wafer using one of a mathematical formulation or a stylus and a pad.

Claim 6 (original): The method of claim 1, further including adding the recent defect spatial signature to the defect database.

Claim 7 (original): The method of claim 1, further including adjusting a process if the recent defect spatial signature corresponds to at least one of the defect spatial signatures of the defect database.

Claim 8 (previously presented): The method of claim 1, wherein creating the defect database includes:

creating a relational database of defects; and

storing coordinates of a process signature of a first type and storing coordinates of a process signature of a second type, wherein the coordinates of the process signatures of the first and second types are relative to each other.

Claim 9 (original): The method of claim 1, wherein the defect spatial signatures are from at least one of particle contamination, mechanical surface damage, wafer spinning processes, scratching, and polishing.

Claim 10 (currently amended): A method for evaluating defect spatial signatures in a semiconductor manufacturing process, comprising:

generating a database of defect locations from multiple individual wafers ~~spatial signatures~~, wherein macroscopic spatial patterns on the wafers have not been identified ~~the defect spatial signatures are uncorrelated~~;

inspecting a wafer having at least one macroscopic ~~defect~~ spatial signature; and

determining if the at least one macroscopic ~~defect~~ spatial signature on the inspected wafer matches a spatial pattern reconstructed from the database of defect locations ~~corresponds to a defect spatial signature in the database of defect spatial signatures~~.

Claim 11 (currently amended): The method of claim 10, further including modifying the semiconductor manufacturing process if the at least one macroscopic ~~defect~~ spatial signature on ~~of~~ the inspected wafer corresponds to a macroscopic ~~defect~~ spatial signature in the database of defect locations from the multiple individual wafers ~~spatial signatures~~.

Claim 12 (currently amended): The method of claim 10, wherein the macroscopic ~~defect~~ spatial signatures are uncategorized.

Claim 13 (previously presented): The method of claim 10, wherein inspecting the wafer includes creating a relational database of defect spatial signatures and storing coordinates of defect spatial signatures of a first type and storing coordinates of defect spatial signatures of a second type.

Claim 14 (previously presented): The method of claim 13, further including identifying a local density of defects for each wafer using one of a mathematical formulation or a stylus and a pad.

Claim 15 (currently amended): A method for determining the occurrence of an anomalous event, comprising:

storing a plurality of defect coordinate data ~~spatial signatures~~ in a storage device, wherein the defect locations ~~spatial signatures~~ are uncorrelated and wafer level patterns of the defect locations have not been identified ~~uncharacterized~~;

identifying a wafer level ~~creating a defect~~ spatial signature of a recent anomalous event; and

determining if the recent identified wafer level ~~defect~~ spatial signature ~~of the recent anomalous event~~ corresponds to one of the ~~plurality of defect~~ spatial patterns identified through reconstructing and analyzing the defect locations on wafers held in the storage device.

Claim 16 (canceled)

Claim 17 (currently amended): The method of claim 15, further including modifying a process flow if the defect spatial location ~~signature~~ of the recent anomalous event corresponds to one of the ~~plurality of defect~~ spatial patterns ~~signatures~~ in the storage device.

Claim 18 (currently amended): The method of claim 15, wherein identifying a wafer level spatial signature of a recent anomalous event ~~creating the defect spatial signature~~ includes creating a relational database of defects.

Claim 19 (original): The method of claim 18, further including storing coordinates of a process signature of a first defect and storing coordinates of a process signature of a second defect, wherein the coordinates of the process signatures of the first and second defects are in relation to each other.

Claim 20 (previously presented): The method of claim 19, further including identifying a local density of defects for each wafer using one of a mathematical formulation or a stylus and a pad.